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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,123	12/07/2001	Takahiro Yamashita	32011-176968	1043

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EXAMINER	
NEURAUTER, GEORGE C	
ART UNIT	**PAPER NUMBER**
2143	

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/005,123	YAMASHITA ET AL.	
	Examiner	Art Unit	
	George C. Neurauter, Jr.	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12072001*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-20 are currently pending and have been examined.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

Claims 11, 12, and 15 are objected to because of the following informalities:

Claims 11, 12, and 15 contain the phrase "...said transmission control rule obtained by said first search means is only transmission route information...". The word "the" should be added between the words "is" and "only".

Appropriate correction is required.

Claim Interpretation

The element "transmission control rule" defined on page 7, line 11-page 8, line 8 of the specification and recited in claims 1-20 will be given its broadest reasonable interpretation and will be interpreted by the Examiner as information that sets the transmission route that is consistent with the disclosures of the specification and the interpretation that those skilled in the art would reach. See MPEP § 2111.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 4, 6-7, and 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 4 recites the limitation "storage position information". This limitation is not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 6 and 7 recite the limitation "...layer of the protocol..." This limitation, specifically the "protocol", is not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 9 recites the limitation "orientation information". This limitation is not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim 1 recites the limitation "...corresponding to the information that has thus been read..." It is unclear as to what information is being referred to and lacks antecedent basis.

Claim 4 recites "...said transmission control rule is stored as one or other entry and storage position information of said transmission control rule is stored as the other entries".

It is unclear as to what is meant by this limitation, specifically in which entry the transmission control rule and storage position information is stored.

Claim 6 recites the limitation "...the third layer of the protocol or a layer above this..." It is unclear as to what protocol is being referred to. It is also unclear as to what layer above "this" is referred to and, specifically, what element "this" refers to. The limitations "the third layer" and "the protocol" also lack antecedent basis.

Claim 7 recites the limitation "...the second layer of the protocol..." It is unclear as to what protocol is being referred to. The limitations "the second layer" and "the protocol" also lack antecedent basis.

Claim 13 recites the limitation "search results that have already been input". There is insufficient antecedent basis for this limitation in the claim.

Claim 13 recite the limitation "said newly input transmission control rule". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-16 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5 917 821 to Gobuyan et al.

Regarding claim 1, Gobuyan discloses a datagram transmission device comprising:

first search means (referred to throughout the reference as "destination address look-up engine" or "DALE") that reads the destination address from a received datagram and searches for a transmission control rule ("filter") corresponding to the destination address; (column 1, lines 24-28; column 2, lines 13-17 and 40-50; column 3, lines 20-24; column 10, lines 10-17)

one or a plurality of second search means ("source address look-up engine" or "SALE") (alternatively "microcode engine" or "LEC") that reads prescribed information other than the destination address information from said datagram ("source address") (alternatively "protocol") and that searches for a transmission control rule ("filter") corresponding to the information that has thus been read; (column 1, lines 24-28; column 2, lines 13-17 and 40-50; column 3, lines 20-24; column 10, lines 10-17; column 11, lines 29-37) (see also "filtering rule tree"; Figure 16)

decision means that respectively inputs search results from said first and second search means and determines said transmission control rule contained in the search results of all of said search means; (column 3, lines 20-28) and

execution means that executes transmission control in accordance with said transmission control rule determined by said decision means. (column 2, lines 40-50, specifically lines 46-50)

Regarding claim 2, Gobuyan discloses the datagram transmission device according to claim 1 wherein said first search means and said second search means perform said searches in parallel. (column 2, lines 32-39; column 3, lines 24-28)

Regarding claim 3, Gobuyan discloses the datagram transmission device according to claim 1 wherein said transmission control rules that are searched are stored for each of said search means. (column 9, lines 5-10) (alternatively "SIB"; column 11, lines 29-37)

Regarding claim 4, Gobuyan discloses the datagram transmission device according to claim 1 wherein, if there are a plurality of entries of the same said transmission control rule, said transmission control rule is stored as one or other entry and storage position information of said transmission control rule is stored as the other entries. (column 3, lines 15-17)

Regarding claim 5, Gobuyan discloses the datagram transmission device according to claim 4 wherein said storage position information is information in bit map form. (Figure 16; column 12, line 10)

Regarding claim 6, Gobuyan discloses the datagram transmission device according to claim 1 wherein said second search means employs information belonging to the third layer of the protocol ("network layer") or a layer above this as said information. (column 2, lines 13-17)

Regarding claim 7, Gobuyan discloses the datagram transmission device according to claim 1 wherein said second search means employs information belonging to the second layer of the protocol ("MAC") as said information. (column 2, lines 13-17)

Regarding claim 8, Gobuyan discloses the datagram transmission device according to claim 7 wherein the information belonging to said second layer is information indicating a virtual channel identifier of asynchronous transfer mode. ("CI"; column 4, lines 59-61)

Regarding claim 9, Gobuyan discloses the datagram transmission device according to claim 8 wherein said transmission control rule is orientation information. ("filter"; column 2, lines 40-50)

Regarding claim 10, Gobuyan discloses the datagram transmission device according to claim 1 wherein said decision means, after inputting all of the search results of said first and second search means, calculates the logical product of these search results, and outputs the result of this calculation as the decision result. (column 3, lines 26-28)

Regarding claim 11, Gobuyan discloses the datagram transmission device according to claim 10 wherein, if said transmission control rule obtained by said first search means is only transmission route information, said transmission route information is output as the decision result without carrying out said logical product calculation. (column 10, lines 40-44)

Regarding claim 12, Gobuyan discloses the datagram transmission device according to claim 11 wherein, if it is ascertained that said transmission control rule obtained by said first search means is only transmission route information, a control signal is output for interrupting the operation of said second search means. (column 10, lines 40-44)

Regarding claim 13, Gobuyan discloses the datagram transmission device according to claim 1 wherein, every time said decision means inputs said transmission control rule as the search result from said first and second search means, said decision means calculates the logical product between the

logical product of said search results that have already been input and said newly input transmission control rule, and outputs the final calculation result as the decision result. (column 3, lines 14-15 and 26-28)

Regarding claim 14, Gobuyan discloses the datagram transmission device according to claim 13 wherein, if said transmission control rule obtained by said first search means is only transmission route information, said transmission route information is output as the decision result without subsequently performing said logical calculation. (column 10, lines 40-44)

Regarding claim 15, Gobuyan discloses the datagram transmission device according to claim 14 wherein, if it is ascertained that said transmission control rule obtained by said first search means is only transmission route information, a control signal is output for interrupting operation of said second search means. (column 10, lines 40-44)

Regarding claim 16, Gobuyan discloses the datagram transmission device according to claim 1, wherein said first and second search means perform searching using a dichotomizing search method. (column 3, lines 14-15)

Regarding claim 18, Gobuyan discloses the datagram transmission device according to claim 1 wherein said datagram

transmission device is an Internet protocol router. (column 2, lines 4-17, specifically lines 7-8 and 15)

Regarding claim 19, Gobuyan discloses the datagram transmission device according to claim 1 wherein said datagram transmission device is an Internet protocol switch. (column 2, lines 4-17, specifically lines 7-8 and 15)

Regarding claim 20, Gobuyan discloses the datagram transmission device according to claim 1 wherein said datagram is an Internet protocol packet. (column 2, lines 4-17, specifically lines 7-8 and 15; column 5, lines 27-42)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gobuyan et al. in view of Applicant's admitted prior art, specifically Laidopen Japanese Patent Publication No. 2000-188608.

Regarding claim 17, Gobuyan discloses the datagram transmission device according to claim 1.

Gobuyan does not expressly disclose wherein said first and second search means perform searching using the 2^P search method.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of these references since the Applicant discloses that the 2^P search method speeds up a route search wherein the search of P branch levels can be performed by a single process and the search is reduced by a factor of 1/P (page 2, lines 6-12 of the specification). In view of these specific advantages and that both references are directed to route searching through the use of a dichotomizing search method, one of ordinary skill would have been motivated to combine these references and would have considered them to be analogous to one another based on their related fields of endeavor.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following prior art teaches the state of the art in datagram transmission devices and searching means:

US Patent 5 463 777 to Bialkowski et al;

US Patent 6 061 712 to Tzeng;

US Patent 6 097 725 to Glaise et al;

US Patent 6 192 051 to Lipman et al;

US Patent 6 212 184 to Venkatachary et al;

US Patent 6 308 219 to Hughes;

US Patent 6 778 532 to Akahane et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Neurauter, Jr. whose telephone number is (571) 272-3918. The examiner can normally be reached on Monday through Friday from 9AM to 5:30PM Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gcn .

DAVID WILEY
SUPERVISORY PATENT EXAMINER
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